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EXAMINER				
FINDLEY, CHRISTOPHER G				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/702,557

Applicant(s)

SEO ET AL.

Examiner

CHRISTOPHER FINDLEY

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 9, 10, 12-16, 19-30 and 32-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 9, 10, 12-16, 19-30 and 32-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-946)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 12/21/2010, 2/16/2011
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 1/18/2011 have been fully considered but they are not persuasive.
2. Re claims 1 and 12-15, the Applicant contends that the prior art cited fails to teach or suggest using entry points identified by an entry point map, the map mapping a presentation time stamp to an address for at least one entry point in the associated stream file, and wherein the map identifies the address for the at least one entry point by identifying the packet number of the data packets. However, the Examiner respectfully disagrees. While the Examiner concedes that such an explicit teaching is not found in Yamane, Kato does disclose those features. Upon further investigation of the Kato reference, said features are found in Figs. 63 and 67, and page 52, lines 18-28 of Kato. The claim features have been addressed in further detail in the office action included below.
3. Note: the cited prior art of Kato is the international application for the corresponding, previously cited US national stage application by the same inventor. Accordingly, the appropriate portions of the international application are cited below along with the corresponding sections of the US national stage application acting as an English translation of the Japanese document where necessary.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1-6, 9, 10, 12-16, 19-30, and 32-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (PCT/JP01/03414, hereinafter referred to as "Kato") in view of Yamane et al. (US 6181872 B1, hereinafter referred to as "Yamane").**

Re **claim 1**, Kato discloses a computer readable medium storing a data structure for managing reproduction of video data (Kato: Fig. 1, recording medium 100), comprising: a data directory for storing stream files (Kato: Fig. 14, M2TS directory contains .m2ts files); a playlist directory for storing a playlist file, the playlist file including at least one playitem, the playitem indicating a playing interval from in-point until out-point, the in-point and out-point pointing to time positions on a time axis of the video data (Kato: Fig. 14, PLAYLIST directory contains .pls files; Fig. 63 shows the association of a PlayItem in the PlayList with IN points and OUT points); and a clip information directory for storing clip information files for managing reproduction of the video data, each one of the clip information files being associated with a different one of the stream files (Kato: Fig. 14, CLIPINF directory contains .clpi files; page 29, lines 20-25, corresponding to paragraph [0259] of the pre-grant publication for the national stage application, each AV stream file has a corresponding file stored in the CLIPINF directory), each clip information file including a map for the associated stream file, the map mapping a presentation time stamp to an address for at least one entry point in the associated stream file (Kato: Fig. 67; page 52, lines 18-24, corresponding to paragraph [0381] of the pre-grant publication for the national stage application), wherein the video data includes data packets and each data packet has a packet number that differentiates one data packet from another data packet, and the map identifies the address for the at least one entry point by identifying the packet number of the data packets (Kato: Fig. 67; page 52, lines 18-28, corresponding to paragraphs [0381] and [0382] of the pre-grant publication for the national stage application, each EP map entry is associated with a packet identifier (PID), wherein each EP map entry also correlates presentation timestamps (PTS) to addresses).

Kato further discloses that plural video streams may exist in each clip (Kato: page 52, lines 25-28, corresponding to paragraph [0382] of the pre-grant publication for the national stage application) and that a PlayItem may include SubPlayItems, both of which are accessed via an EP map in the clip information directory (Kato: Fig. 63), but Kato does not explicitly disclose that each stream file includes a portion of video data associated with one of a common reproduction path and a particular reproduction path, each particular reproduction path being one path among multiple reproduction paths in the video data, and a path change among the multiple reproduction paths is performed at the entry point identified by the map.

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However, Yamane discloses that the data streams consist of common angle data sections with interleaved multi-angle scene periods mixed in between the common angle data sections (Yamane: Fig. 46). While Kato relates to Blu-Ray technology and Yamane relates to DVD technology, the Examiner asserts that one of ordinary skill in the art at the time of the invention would have found it obvious to combine the principle relied upon from Yamane with the disclosure of Kato, because both documents disclose the use of AV data arranged on an recording medium, and the buffer underflow/overflow protection of Yamane is therefore applicable to the recording and reproducing scheme of Kato. Accordingly, in order to guard against such an overflow or underflow while enabling virtual playlist control such as in Kato, regulation of the size of the interleaving units, as disclosed by Yamane, would be an obvious inclusion. Therefore, by using the data structure of Kato including the EP map and the multiple reproduction paths of Yamane, the combination of Kato and Yamane discloses a stream file and associated clip information file for each unit of both common and multiple reproduction paths while being accessed by an EP map.

Re **claim 2**, Kato does not explicitly disclose that the stream files are interleaved. However, Yamane discloses a multimedia stream enabling alternative reproduction of video data, wherein multimedia data is segmented into interleaved units of a particular size so that the seek distance of any seek operation can be suppressed to the size of the interleave unit, and reproduction can be sustained without causing a buffer overflow (Yamane: column 37, lines 39-45) and also guarding against buffer underflow (Yamane: column 39, lines 24-37). While Kato relates to Blu-Ray technology and Yamane relates to DVD technology, the Examiner asserts that one of ordinary skill in the art at the time of the invention would have found it obvious to combine the principle relied upon from Yamane with the disclosure of Kato, because both documents disclose the use of AV data arranged on an recording medium, and the buffer underflow/overflow protection of Yamane is therefore applicable to the recording and reproducing scheme of Kato. Accordingly, in order to guard against such an overflow or underflow while enabling virtual playlist control such as in Kato, regulation of the size of the interleaving units, as disclosed by Yamane, would be an obvious inclusion.

Re claim 3, Kato discloses that the stream files associated with the particular reproduction path are interleaved between the stream files associated with the common reproduction paths (Kato: Fig. 3 shows a virtual playlist section using clip information from subsections of the clip information files).

Re claim 4, Kato does not explicitly disclose that common reproduction path and the particular reproduction path are respectively divided into one or more interleaving units, the interleaving units include packets associated with entry points, and a size of the interleaving unit and a number of entry points in the interleaving unit are determined to meet a buffer occupancy of a reproducing apparatus. However, Yamane discloses a multimedia stream enabling alternative reproduction of video data, wherein multimedia data is segmented into interleaved units of a particular size so that the seek distance of any seek operation can be suppressed to the size of the interleave unit, and reproduction can be sustained without causing a buffer overflow (Yamane: column 37, lines 39-45) and also guarding against buffer underflow (Yamane: column 39, lines 24-37). Yamane also discloses considering the jumpable distance when arranging the multi-angle sections on the disk, wherein there is a correlation between the number of angles and the number of interleave units (Yamane: column 55, lines 21-60). Yamane further discloses that address data is included in the navigation packs for making jumps between interleaving units corresponding to alternate angles (Yamane: column 55, line 61, through column 57, line 67). While Kato relates to Blu-Ray technology and Yamane relates to DVD technology, the Examiner asserts that one of ordinary skill in the art at the time of the invention would have found it obvious to combine the principle relied upon from Yamane with the disclosure of Kato, because both documents disclose the use of AV data arranged on a recording medium, and the buffer underflow/overflow protection of Yamane is therefore applicable to the recording and reproducing scheme of Kato. Accordingly, in order to guard against such an overflow or underflow while enabling virtual playlist control such as in Kato, regulation of the size of the interleaving units, as disclosed by Yamane, would be an obvious inclusion.

Re claim 5, Kato does not explicitly disclose that the size and the number of entry points are determined to prevent a buffer from under-flowing or over-flowing during reproduction of the stream files. However, Yamane discloses a multimedia stream enabling alternative reproduction of video data, wherein multimedia data is segmented into interleaved units of a particular size so that the seek distance of any

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seek operation can be suppressed to the size of the interleave unit, and reproduction can be sustained without causing a buffer overflow (Yamane: column 37, lines 39-45) and also guarding against buffer underflow (Yamane: column 39, lines 24-37). While Kato relates to Blu-Ray technology and Yamane relates to DVD technology, the Examiner asserts that one of ordinary skill in the art at the time of the invention would have found it obvious to combine the principle relied upon from Yamane with the disclosure of Kato, because both documents disclose the use of AV data arranged on a recording medium, and the buffer underflow/overflow protection of Yamane is therefore applicable to the recording and reproducing scheme of Kato. Accordingly, in order to guard against such an overflow or underflow while enabling virtual playlist control such as in Kato, regulation of the size of the interleaving units, as disclosed by Yamane, would be an obvious inclusion.

Re **claim 6**, Kato does not explicitly disclose that more than one stream file is associated with one reproduction path when the one reproduction path includes data exceeding a stream file size to prevent the reproducing apparatus buffer from overflowing during reproduction of the stream files. However, Yamane discloses a multimedia stream enabling alternative reproduction of video data, wherein multimedia data is segmented into interleaved units of a particular size so that the seek distance of any seek operation can be suppressed to the size of the interleave unit, and reproduction can be sustained without causing a buffer overflow (Yamane: column 37, lines 39-45) and also guarding against buffer underflow (Yamane: column 39, lines 24-37). While Kato relates to Blu-Ray technology and Yamane relates to DVD technology, the Examiner asserts that one of ordinary skill in the art at the time of the invention would have found it obvious to combine the principle relied upon from Yamane with the disclosure of Kato, because both documents disclose the use of AV data arranged on a recording medium, and the buffer underflow/overflow protection of Yamane is therefore applicable to the recording and reproducing scheme of Kato. Accordingly, in order to guard against such an overflow or underflow while enabling virtual playlist control such as in Kato, regulation of the size of the interleaving units, as disclosed by Yamane, would be an obvious inclusion.

Claim 9 has been analyzed and rejected with respect to claim 4 above.

Claim 10 has been analyzed and rejected with respect to claim 5 above.

Re **claim 12**, Kato discloses a method of recording a data structure for managing reproduction of video data on a recording medium (Kato: Fig. 1, the system includes a write unit 22; page 16, lines 8-14, corresponding to paragraph [0188] of the pre-grant publication for the national stage application, a recording process is executed), comprising: recording stream files on the recording medium (Kato: Fig. 14, M2TS directory contains .m2ts files); recording at least one playlist file on the recording medium, the playlist file including at least one playitem, the playitem indicating a playing interval from in-point until out-point, the in-point and out-point pointing to time positions on a time axis of the video data (Kato: Fig. 14, PLAYLIST directory contains .rpls files; Fig. 63 shows the association of a PlayItem in the PlayList with IN points and OUT points); and recording clip information files on the recording medium, the clip information files for managing reproduction of the video data, each one of the clip information files being associated with a different one of the stream files (Kato: Fig. 14, CLIPINF directory contains .clpi files; page 29, lines 20-25, corresponding to paragraph [0259] of the pre-grant publication for the national stage application, each AV stream file has a corresponding file stored in the CLIPINF directory), each clip information file including a map for the associated stream file, the map mapping a presentation time stamp to an address for at least one entry point in the associated stream file (Kato: Fig. 67; page 52, lines 18-24, corresponding to paragraph [0381] of the pre-grant publication for the national stage application), wherein the video data includes data packets and each data packet has a packet number that differentiates one data packet from another data packet, and the map identifies the address for the at least one entry point by identifying the packet number of the data packets (Kato: Fig. 67; page 52, lines 18-28, corresponding to paragraphs [0381] and [0382] of the pre-grant publication for the national stage application, each EP map entry is associated with a packet identifier (PID), wherein each EP map entry also correlates presentation timestamps (PTS) to addresses).

Kato further discloses that plural video streams may exist in each clip (Kato: page 52, lines 25-28, corresponding to paragraph [0382] of the pre-grant publication for the national stage application) and that a Playitem may include SubPlayItems, both of which are accessed via an EP map in the clip information directory (Kato: Fig. 63), but Kato does not explicitly disclose that each stream file includes a portion of video data associated with one of a common reproduction path and a particular reproduction path, each

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particular reproduction path being one path among multiple reproduction paths in the video data, and a path change among the multiple reproduction paths is performed at the entry point identified by the map. However, Yamane discloses that the data streams consist of common angle data sections with interleaved multi-angle scene periods mixed in between the common angle data sections (Yamane: Fig. 46). While Kato relates to Blu-Ray technology and Yamane relates to DVD technology, the Examiner asserts that one of ordinary skill in the art at the time of the invention would have found it obvious to combine the principle relied upon from Yamane with the disclosure of Kato, because both documents disclose the use of AV data arranged on a recording medium, and the buffer underflow/overflow protection of Yamane is therefore applicable to the recording and reproducing scheme of Kato. Accordingly, in order to guard against such an overflow or underflow while enabling virtual playlist control such as in Kato, regulation of the size of the interleaving units, as disclosed by Yamane, would be an obvious inclusion. Therefore, by using the data structure of Kato including the EP map and the multiple reproduction paths of Yamane, the combination of Kato and Yamane discloses a stream file and associated clip information file for each unit of both common and multiple reproduction paths while being accessed by an EP map.

Re claim 13, Kato discloses a method of reproducing a data structure for managing reproduction of video data recorded on a recording medium (Kat: Fig. 1, the system includes a readout unit 28; page 16, line 16-page 17, line 2, corresponding to paragraphs [0190] and [0191] of the pre-grant publication for the national stage application, a reproducing process is executed), comprising: reproducing at least one playlist file from the recording medium, the playlist file including at least one playitem, the playitem indicating a playing interval from in- point until out-point, the in-point and out-point pointing to time positions on a time axis of the video data (Kato: Fig. 14, PLAYLIST directory contains .rpls files; Fig. 63 shows the association of a PlayItem in the PlayList with IN points and OUT points); reproducing at least one clip information file from the recording medium, the clip information file for managing reproduction of the video data (Kato: Fig. 14, CLIPINF directory contains .clpi files); and reproducing at least one stream file from the recording medium (Kato: Fig. 14, M2TS directory contains .m2ts files), wherein each one of the clip information files being associated with different one of stream files (Kato: page 29, lines 20-25,

corresponding to paragraph [0259] of the pre-grant publication for the national stage application, each AV stream file has a corresponding file stored in the CLIPINF directory), each clip information file including a map for the associated stream file, the map mapping a presentation time stamp to an address for at least one entry point in the associated stream file (Kato: Fig. 67; page 52, lines 18-24, corresponding to paragraph [0381] of the pre-grant publication for the national stage application), wherein the video data includes data packets and each data packet has a packet number that differentiates one data packet from another (Kato: Fig. 67; page 52, lines 18-28, corresponding to paragraphs [0381] and [0382] of the pre-grant publication for the national stage application, each EP map entry is associated with a packet identifier (PID), wherein each EP map entry also correlates presentation timestamps (PTS) to addresses); and the map identifies the address for the at least one entry point by identifying the packet number of the data packets (Kato: Fig. 67; page 52, lines 18-28, corresponding to paragraphs [0381] and [0382] of the pre-grant publication for the national stage application, each EP map entry is associated with a packet identifier (PID), wherein each EP map entry also correlates presentation timestamps (PTS) to addresses).

Kato further discloses that plural video streams may exist in each clip (Kato: page 52, lines 25-28, corresponding to paragraph [0382] of the pre-grant publication for the national stage application) and that a PlayItem may include SubPlayItems, both of which are accessed via an EP map in the clip information directory (Kato: Fig. 63), but Kato does not explicitly disclose that each stream file includes a portion of video data associated with one of a common reproduction path and a particular reproduction path, each particular reproduction path being one path among multiple reproduction paths in the video data, and a path change among the multiple reproduction paths is performed at the entry point identified by the map. However, Yamane discloses that the data streams consist of common angle data sections with interleaved multi-angle scene periods mixed in between the common angle data sections (Yamane: Fig. 46). While Kato relates to Blu-Ray technology and Yamane relates to DVD technology, the Examiner asserts that one of ordinary skill in the art at the time of the invention would have found it obvious to combine the principle relied upon from Yamane with the disclosure of Kato, because both documents disclose the use of AV data arranged on a recording medium, and the buffer underflow/overflow protection of Yamane is therefore applicable to the recording and reproducing scheme of Kato.

Accordingly, in order to guard against such an overflow or underflow while enabling virtual playlist control such as in Kato, regulation of the size of the interleaving units, as disclosed by Yamane, would be an obvious inclusion. Therefore, by using the data structure of Kato including the EP map and the multiple reproduction paths of Yamane, the combination of Kato and Yamane discloses a stream file and associated clip information file for each unit of both common and multiple reproduction paths while being accessed by an EP map.

Claim 14 recites the corresponding recording apparatus for implementing the recording method of claim 12. Arguments analogous to those presented for claim 12 are applicable to claim 14, and therefore claim 14 has been analyzed and rejected with respect to claim 12 above.

Claim 15 recites the corresponding reproducing apparatus for implementing the reproducing method of claim 13. Arguments analogous to those presented for claim 13 are applicable to claim 15, and therefore claim 15 has been analyzed and rejected with respect to claim 13 above.

Re **claim 16**, Kato discloses that only one stream file is associated with each particular reproduction path representing a same time period of the video data (Kato: Fig. 3, each particular clip information file is associated with a particular AV stream file).

Claim 19 has been analyzed and rejected with respect to claim 3 above.

Claim 20 has been analyzed and rejected with respect to claim 4 above.

Claim 21 has been analyzed and rejected with respect to claim 5 above.

Claim 22 has been analyzed and rejected with respect to claim 3 above.

Claim 23 has been analyzed and rejected with respect to claim 4 above.

Claim 24 has been analyzed and rejected with respect to claim 5 above.

Claim 25 has been analyzed and rejected with respect to claim 3 above.

Claim 26 has been analyzed and rejected with respect to claim 4 above.

Claim 27 has been analyzed and rejected with respect to claim 5 above.

Claim 28 has been analyzed and rejected with respect to claim 3 above.

Claim 29 has been analyzed and rejected with respect to claim 4 above.

Claim 30 has been analyzed and rejected with respect to claim 5 above.

Re claim 32, Kato discloses that the playlist file includes at least one indicator for indicating a reproduction order of the common and particular reproduction path (Kato: Fig. 3).

Re claim 33, Kato discloses that the recording unit includes a pickup to record the vdata on the recording medium (Kato: Fig. 1, write unit 22).

Re claim 34, Kato discloses that the reproducing unit includes a pickup to reproduce the vdata from the recording medium (Kato: Fig. 1, readout unit 22).

Re claim 35, Kato discloses that plural video streams may exist in each clip (Kato: page 52, lines 25-28, corresponding to paragraph [0382] of the pre-grant publication for the national stage application) and that a PlayItem may include SubPlayItems, both of which are accessed via an EP map in the clip information directory (Kato: Fig. 63), but Kato does not explicitly disclose that the controller is configured to control the recording unit to reproduce the video data in stream files to perform a path change among the multiple reproduction paths. However, Yamane discloses that the data streams consist of common angle data sections with interleaved multi-angle scene periods mixed in between the common angle data sections (Yamane: Fig. 46). While Kato relates to Blu-Ray technology and Yamane relates to DVD technology, the Examiner asserts that one of ordinary skill in the art at the time of the invention would have found it obvious to combine the principle relied upon from Yamane with the disclosure of Kato, because both documents disclose the use of AV data arranged on an recording medium, and the buffer underflow/overflow protection of Yamane is therefore applicable to the recording and reproducing scheme of Kato. Accordingly, in order to guard against such an overflow or underflow while enabling virtual playlist control such as in Kato, regulation of the size of the interleaving units, as disclosed by Yamane, would be an obvious inclusion. Therefore, by using the data structure of Kato including the EP map and the multiple reproduction paths of Yamane, the combination of Kato and Yamane discloses a stream file and associated clip information file for each unit of both common and multiple reproduction paths while being accessed by an EP map.

Re claim 36, Kato discloses that the playitem on the playlist file indicating at least one clip information file, each of the clip information file associated with different one of the stream files including

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the portions of the video data associated with the particular reproduction path (Fig. 63 shows the association of a PlayItem in the PlayList with IN points and OUT points and clip information files).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:
 - a. Information processing apparatus and method, program, and recorded medium; Kato et al. (US 20050019007 A1)
7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER FINDLEY whose telephone number is 571-270-1199. The examiner can normally be reached on Monday-Friday (8:30 AM-5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher Kelley/
Supervisory Patent Examiner, Art Unit
2424

/Christopher Findley/